

REMARKS

Claims remaining in the present application are Claims 1-27. Claims 1, 2, 10, and 17 have been amended. Claim 27 has been added. No new matter has been added as a result.

DRAWINGS

The drawings are objected to for reasons set forth in form PTO-948 attached to the Office Action mailed January 2, 2003. Formal drawings have been filed herewith to correct informalities in the drawings. No new matter has been added as a result.

CLAIM REJECTIONS

35 U.S.C. 102(e)

Claims 1, 3-9, 17, and 19-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Zizzo (Pub. No. U.S. 2002/0188910 A1) (hereinafter, Zizzo). The rejection is respectfully traversed. It is respectfully submitted that Claims 1, 3-9, 17, and 19-26 are not anticipated by Zizzo.

Amended Independent Claim 1 recites:

A method of facilitating circuit design, said method comprising:

a) causing to be displayed information related to a module of a plurality of available modules, said module representing a function implementable in resources available to implement a circuit, said display performed in response to said module being selected; and

b) determining a valid position for said module in a graphical user interface, said graphical user interface having a plurality of resource icons representing said resources, said valid position based on characteristics of said module and characteristics of said resources, said determination made in response to a request for said valid position for said module in said graphical user interface.

Claim 1 has been amended to clarify that the recited "resources" are "available to implement a circuit." Support for this amended can be found the previously amended paragraph, which was located on page 11, line 5 of the original Specification:

Referring now to Figure 1B, a user module placement work-space includes a resource graphic window 360 illustrating the placement of user modules 304 with respect to the available resources (e.g., available programming system blocks 410 of a microcontroller) in a hardware layout graphical display. Throughout this application the term resource icon may denote the blocks 410 upon which user modules 304 are placed in window 360. As the resource icons may represent programming system blocks in one embodiment, the resource icons may be referred to as programming system blocks for convenience. It will be understood that the resource icons may represent other resources however, as the present invention is not limited to implementing the user modules 304 in programming system blocks. Figure 1B shows a number of digital programming system blocks 410a along the top row (e.g., the blocks labeled DBA00, DBA01, etc.), as well as four columns of analog programming system blocks 410b (e.g., the blocks labeled ACA00, ACA01, etc.). The present invention is well suited to using any number of analog and digital programming system blocks 410. Furthermore, the blocks in graphic window 360 are not limited to representing programming system blocks.

Anticipation made under 35 U.S.C. §102 requires the disclosure in a single prior art reference disclosure of each element of the claim under consideration (W.L. Gore & Assocs. v. Garlock, Inc., 220 USPQ 303, 313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). Zizzo fails to disclose each element of Claim 1. Therefore, is respectfully submitted that Claim 1 is not anticipated by Zizzo.

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Claim 1 recites “a graphical user interface having a plurality of resource icons representing said resources.” Zizzo fails to disclose “a graphical user interface having a plurality of resource icons representing said resources,” as claimed. In paragraph [0054] Zizzo discloses a GUI that allows a user to place and move IP cores within the SoC design. However, Zizzo fails to disclose resource icons representing said resources, as claimed. In contrast, Zizzo discloses that the user places and moves a graphical representation of the selected IP core. However, the selected IP core is not a resource, as claimed. In contrast, an IP core is a virtual circuit block (paragraph [0006]). The GUI as claimed has icons that represent resources. Moreover, the resources are recited in Claim 1 as, “available to implement a circuit.”

Paragraph [0074] and Figure 8C of Zizzo disclose further details of a GUI. For example, an icon 825 depicting various IP component data file folders may be displayed. Specifics of this data can be displayed in another window 830. Again, Zizzo is referring to the IP cores and not to “resources available to implement a circuit,” as claimed. Thus, paragraph [0074] does not disclose “a graphical user interface having a plurality of resource icons representing said resources,” as claimed. For the foregoing reasons, Zizzo does not anticipate Claim 1.

Claim 1 further recites “determining a valid position for said module in a graphical user interface ... said determination made in response to a request for said valid position for said module in said graphical user interface”. Zizzo fails to

disclose this limitation. For this additional reason, Zizzo does not anticipate Claim 1.

Zizzo discloses that a user may place and move an IP core in the overall SoC design (paragraph [0054]). For example, Zizzo discloses that the user may drag the symbol for the IP core onto the schematic program. However, Zizzo fails to disclose that a valid position for a module is determined in response to a request for a valid position in the GUI, as claimed. At a minimum, what is missing from Zizzo's disclosure is the determination of a valid position ... made in response to a request for the valid position, as claimed. For example, Applicants do not understand Zizzo to disclose a request for the valid position, as claimed. Moreover, Applicants do not understand Zizzo to disclose a determination for said valid position, made in response to the request, as claimed.

For the foregoing rationale, it is respectfully submitted that Claim 1 is not anticipated by Zizzo. As such, allowance of Claim 1 is earnestly solicited.

Claims 3-9 depend from Claim 1, which is believed to be allowable for the foregoing reasons. As such, it is respectfully submitted that Claims 3-9 are not anticipated by Zizzo. Allowance of Claims 3-9 is earnestly solicited.

Amended Independent Claim 17 recites similar limitations as Claim 1. For the reasons discussed in the response to Claim 1, it is respectfully

submitted that Claim 17 is not anticipated by Zizzo. As such, allowance of Claim 17 is earnestly solicited.

Claims 19-26 depend from Claim 17, which is believed to be allowable for the foregoing reasons. As such, it is respectfully submitted that Claims 19-26 are not anticipated by Zizzo. Allowance of Claims 19-26 is earnestly solicited.

35 U.S.C. 103(a)

Claims 2, 10-16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zizzo in view of Comeau et al. (Pub. No. U.S. 2002/0099863 A1) (hereinafter, Comeau). The rejection is respectfully traversed. It is respectfully submitted that Claims 2, 10-16, and 18 are not rendered obvious by Zizzo in view of Comeau.

Amended Independent Claim 10 recites, in part:

- a) determining valid positions in a graphical user interface for selected modules to be placed in said graphical user interface, said graphical user interface describing resources operable to implement said selected modules, said valid positions based on characteristics of said selected modules and characteristics of said resources; and
- b) generating at least two elements selected from the group consisting of: an application programming interface (API) for programming an operation of a first of said selected modules, source code for realizing said selected modules in said resources, an interrupt vector table having a call to an interrupt service routine for a first of said selected modules, and a data sheet for a circuit comprising said selected modules as positioned in said graphical user interface.

Amended Claim 10 recites, "said graphical user interface describing resources operable to implement said selected modules". For reasons discussed in the response to Claim 1, Zizzo fails to teach or suggest this claimed limitation.

Comeau fails to remedy this deficiency. Therefore, neither Zizzo nor Comeau, alone or in combination, teach or suggest this claimed limitation. As such, Claim 10 is not rendered obvious over the cited combination.

Claim 10 further recites that at least two of the following elements are generated: an application programming interface (API) for programming an operation of a first of said selected modules, source code for realizing said selected modules in said resources, an interrupt vector table having a call to an interrupt service routine for a first of said selected modules, and a data sheet for a circuit comprising said selected modules as positioned in said graphical user interface. Neither Zizzo nor Comeau teach or suggest, alone or in combination, an API application programming interface (API) for programming an operation of a first of said selected modules, an interrupt vector table having a call to an interrupt service routine for a first of said selected modules, or a data sheet for a circuit comprising said selected modules as positioned in said graphical user interface. Therefore, Claim 10 is not rendered obvious by Zizzo in view of Comeau.

Regarding “generating an application programming interface (API) for programming an operation of a first of said selected modules,” the rejection concedes that Zizzo fails to disclose this limitation. Moreover, Applicants respectfully submit that Zizzo fails to suggest this limitation. Comeau also fails to disclose or suggest this limitation. In support of the rejection, the Office Action cites Comeau at paragraph [0043]. Applicants note that Comeau discloses various APIs (e.g., Fig. 3, 304, 310). While Comeau may disclose the use of an API, Applicants respectfully submit that Comeau fails to teach or suggest “generating an

application programming interface (API) for programming an operation of a first of said selected modules,” as claimed. For example, Applicants do not understand the API in Comeau to be “for programming an operation of a first of said selected modules,” as claimed.

Regarding, “generating an interrupt vector table having a call to an interrupt service routine for a first of said selected modules,” the rejection concedes that Zizzo fails to disclose this claim limitation. Moreover, Applicants respectfully submit that Zizzo fails to suggest this limitation. Comeau also fails to disclose or suggest this limitation. In support of the rejection, the Office Action cites Comeau at paragraph [0035]. Applicants note that Comeau discloses an interrupt vector table. However, Comeau fails to teach or suggest “generating an interrupt vector table having a call to an interrupt service routine for a first of said selected modules,” as claimed.

Regarding, “generating a data sheet for a circuit comprising said selected modules as positioned in said graphical user interface,” the rejection cites Paragraph [0031] of Zizzo, which discloses that data sheets may be available for the electronic components. The electrical components are described as dynamic parts. However, Zizzo fails to teach or suggest the generation of a data sheet for the circuit that the user constructs. For example, Zizzo fails to teach or suggest the generation of a data sheet for a circuit constructed with the electronic components. Thus, Zizzo fails to teach or suggest generation of a data sheet for a circuit comprising said selected modules as positioned in said graphical user interface, as claimed. Comeau fails to remedy this deficiency in Zizzo, in that Comeau fails

to teach or suggest, “generation of a data sheet for a circuit comprising said selected modules as positioned in said graphical user interface,” as claimed.

Because neither Zizzo nor Comeau, alone or in combination, teach or suggest any of the three discussed limitations, generating at least two elements selected from the group is not rendered obvious by Zizzo in view of Comeau.

For the foregoing rationale, allowance of Claim 10 is respectfully solicited.

Claims 11-16 depend from Claim 10, which is believed to be allowable for the foregoing reasons. As such, it is respectfully submitted that Claims 11-16 are not rendered obvious by Zizzo in view of Comeau. As such, allowance of Claims 11-16 is respectfully solicited.

Claims 2 and 18

For the reasons discussed in the response to Claim 1, Claim 1 is not taught or suggested by Zizzo. Comeau fails to remedy this deficiency in Zizzo. Therefore, neither Zizzo nor Comeau, alone or in combination, teach or suggest the claimed limitation of Claim 1. As Claim 2 depends from Claim 1, it is respectfully submitted that Claim 2 is neither taught or suggested by Zizzo nor Comeau, alone or in combination. Therefore, allowance of Claim 2 is earnestly solicited.

Claim 18, which depends from Claim 17, recites similar limitations as Claim 2. Claim 17 recites similar limitations as Claim 1. For the reasons discussed with respect to Claim 2, it is respectfully submitted that Claim 18 is neither taught nor


suggested by Zizzo nor Comeau, alone or in combination. Therefore, allowance of Claim 18 is earnestly solicited.

CONCLUSION

Should the Examiner have a question regarding the instant response, the Applicants invite the Examiner to contact the Applicants' undersigned representative at the below listed telephone number.

Dated: 4/1, 2003

Respectfully submitted,
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